

CLAIMS:

1. An amplifier circuit comprising:
 - 5 a driver stage having at least a first active device which receives a signal for pre-amplification and outputs a pre-amplified signal;
 - an output stage having at least a second active device which receives said pre-amplified signal for further amplification and output of an amplified signal;
 - 10 a detector which measures levels of forward signal and reflected signal of said amplified signal; and
 - 15 a control circuit which modifies DC levels of at least one of said pre-amplified signal and said amplified signal in response to said levels of forward signal and reflected signal to substantially maintain linearity of said amplifier circuit with load variations.
2. The amplifier circuit of claim 1, wherein said control circuit modifies DC levels of both said pre-amplified signal and said amplified signal to substantially maintain said linearity of said amplifier circuit with said load variations.
3. The amplifier circuit of claim 1, wherein said output stage is coupled to a load without an isolation device between said output stage and said load.
4. The amplifier circuit of claim 1, wherein said control circuit further adjusts a gain of said at least first active device and said at least a second active device as a function of said levels of forward signal and reflected signal to substantially maintain said linearity of said amplifier circuit with said load variations.
5. The amplifier circuit of claim 4, wherein said output stage is coupled to a load without an isolation device between said output stage and said load.
- 30 6. The amplifier circuit of claim 4, wherein said control circuit independently adjust said gain of each of said first active device and said second active device.

7. The amplifier circuit of claim 4, wherein at least one of said first active device and said second active device is an NPN transistor.

8. The amplifier circuit of claim 4, wherein said first active device and said second active device are NPN transistors.

9. The amplifier circuit of claim 1, further comprising an input match circuit coupled between an input of said amplifier circuit and said driver stage for matching an input impedance of said amplifier circuit to an output impedance of a device coupled to said input.

10. The amplifier circuit of claim 9, further comprising at least one capacitor coupled between said input match circuit and said driver stage.

15 11. The amplifier circuit of claim 1, further comprising at least one capacitor coupled between an input of said amplifier circuit and said driver stage.

12. The amplifier circuit of claim 1, further comprising an inter-stage match circuit coupled between an output of said driver stage and an input of said output stage for matching an input impedance of said output stage to an output impedance of said driver stage.

20 13. The amplifier circuit of claim 10, further comprising at least one capacitor coupled between said inter-stage match circuit and said output stage.

25 14. The amplifier circuit of claim 1, further comprising at least one capacitor coupled between said inter-stage match circuit and said output stage.

15. A wireless communication device having an amplifier circuit, said amplifier circuit comprising:

30 a driver stage having at least a first active device which receives a signal for pre-amplification and outputs a pre-amplified signal;

an output stage having at least a second active device which receives said pre-amplified signal for further amplification and output of an amplified signal;

a detector which measures levels of forward signal and reflected signal of said amplified signal; and

5 a control circuit which modifies DC levels of at least one of said pre-amplified signal and said amplified signal in response to said levels of forward signal and reflected signal to substantially maintain linearity of said amplifier circuit with load variations.

16. The wireless communication device of claim 15, wherein said control circuit
10 modifies DC levels of both said pre-amplified signal and said amplified signal to substantially maintain said linearity of said amplifier circuit with said load variations.

17. The wireless communication device of claim 15, wherein said output stage is coupled to a load without an isolation device between said output stage and said load.

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18. The wireless communication device of claim 15, wherein said control circuit further controls turning on and off of said at least first active device and said at least a second active device as a function of said levels of forward signal and reflected signal to substantially maintain said linearity of said amplifier circuit with said load variations.

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19. A method for substantially maintaining linearity of an amplifier circuit with variations of a load coupled to an output of said amplifier circuit comprising:
measuring levels of forward signal and reflected signal at said output; and
modifying DC levels of at least one of a pre-amplified signal provided from a driver
25 stage of said amplifier circuit and an amplified signal provided from an output stage of said amplifier circuit in response to said levels of forward signal and reflected signal to substantially maintain linearity of said amplifier circuit with load variations.

20. The method of claim 20, further comprising independently turning on and off a first active device of said driver stage and a second active device of said output stage as a function of said power levels.